

We claim:

- ~~1. A process for protecting a host animal, comprising~~
5 administering a vaccine *in ovo* to a fertile egg containing an embryo of the
host animal; and wherein the vaccine comprises an immunogenically-
effective amount of a live, avirulent strain of infectious bronchitis virus.
2. The process of Claim 1, wherein the
immunogenically-effective amount is in the approximate range of from
10 about $10^{-1.0}$ EID₅₀ per egg to about $10^{2.0}$ EID₅₀ per egg.
3. The process of Claim 2, wherein the
immunogenically-effective amount is about $10^{-1.0}$ EID₅₀ per egg.
4. The process of Claim 2, wherein the
immunogenically-effective amount is about $10^{0.0}$ EID₅₀ per egg.
- 15 5. The process of Claim 2, wherein the
immunogenically-effective amount is about $10^{1.0}$ EID₅₀ per egg.
6. The process of Claim 2, wherein the
immunogenically-effective amount is about $10^{2.0}$ EID₅₀ per egg.
7. The process of Claim 1, wherein said administering
20 occurs during incubation.
8. The process of Claim 7, wherein:
said administering occurs on approximately day 18 of
incubation.
9. The process of Claim 1, wherein
25 the host animal is a chicken.
10. The process of Claim 9, wherein the chicken is
maternal-antibody-positive.
11. The process of Claim 10, wherein the chicken is other
than a SPF chicken.

12. The process of Claim 11, wherein the chicken originates from a commercial flock of broilers.

13. A process for protecting chickens from exposure to virulent strains of infectious bronchitis virus, comprising administering *in ovo* to fertile chicken eggs a vaccine comprising, on a per egg basis, an immunogenically-effective amount of a live, avirulent strain of infectious bronchitis virus.

14. The process of claim 13, wherein the immunogenically-effective amount is in the approximate range of from about $10^{-1.0}$ EID₅₀ per egg to about $10^{2.0}$ EID₅₀ per egg.

15. A vaccine for protecting chickens from exposure to virulent infectious bronchitis virus, comprising:
a solution containing, on a per chicken egg basis, a live, avirulent strain of infectious bronchitis virus in an immunogenically-effective amount.

16. The vaccine of claim 15, wherein the immunogenically-effective amount is efficacious against subsequent post-hatch exposure of the chicken to virulent infectious bronchitis virus and does not significantly decrease the percentage of *in ovo* vaccinated chicken eggs that hatch upon the expiration of the incubation period.

17. The vaccine of claim 15, wherein the immunogenically-effective amount is in the approximate range of from about $10^{-1.0}$ EID₅₀ per egg to about $10^{2.0}$ EID₅₀ per egg.

18. The vaccine of claim 17, wherein the vaccine contains substantially no virus neutralizing factor.

Sub: C4

add B4

add C6
add D37

add E57